

EVALUATE AND REPORT RESULTS

Evaluating the effectiveness of an energy awareness campaign or program involves measuring the results against the goals. Evaluation enables you to understand the extent to which the expected results were achieved. Perhaps more importantly, evaluation should also reveal what elements of the campaign were effective and which were not—in other words, what worked, what did not, and why. The findings can be used for a mid-course correction or to design future efforts.

Process Evaluation

Persuading people to change their habits is challenging because so many unanticipated external things can influence behavior. Thus, even if you have done your homework to tailor a program to your organization, some surprises are bound to arise along the way. That's where a mid-course evaluation becomes valuable. If you wait until the campaign ends before evaluating it, you may discover that certain aspects of your approach were not effective. By that time, however, you may have lost the opportunity to make changes or corrections. A mid-course evaluation allows you to fine-tune a campaign that is already in progress to better achieve the desired outcomes. In addition, you can shift resources to areas that are working well, while cutting back or eliminating activities that are less effective.

A mid-course evaluation need not be expensive or time-consuming. Several strategic phone calls, personal interviews, or a couple of informational discussions with your team or a group of staff members can reveal much about what's working well, what's not, and why.

If you are using a phone or face-to-face interviews, start with your established contacts—the people who provided input to design the campaign or leaders who are contributing to its implementation. Ask each person if there are others to whom they can refer you who would be willing to answer a few questions. If possible, try to include a diverse group of respondents—both demographically different (men, women, young, older) and from different kinds of workspaces or buildings. Assure them that their responses will help improve the campaign and that no names will be used.

A mid-course correction should provide answers to the following questions

- Are staff members aware of the key elements of the campaign, including incentives, if any?
- Where are they getting their information about the campaign?

- Do they know what they are being asked to do to use energy efficiently?
- Are they doing anything differently now as a result of the campaign, and if so, what?
- Is there anything keeping them from doing these things? If so, what?

In phone interviews or group discussions, listen carefully to what staff members volunteer when they answer questions. Their comments may indicate misunderstandings that need to be corrected, as well as the need for greater emphasis in some areas. At Fort Lewis, for example, many residents said they did not need compact fluorescent lights, thinking that they were only for the fluorescent-type tube fixtures. Though the campaign had encouraged the use of compact fluorescents, people did not understand what they were or that they were available at the base PX. From this finding, future campaign communications placed more emphasis on showing compact fluorescent lights, demonstrating how they fit into various existing fixtures, and reminding people to purchase them on base.

Evaluation of Results

As a minimum, the evaluation for any specific program should investigate two factors: (1) the amount of energy saved, and (2) the extent of people's behavior change that contributed to the savings. Together, these two factors indicate the effectiveness of the program or campaign. The first factor is relatively straightforward to measure by examining before-and-after energy-use data. The second factor is more interpretive, but just as important.

Energy saved. Depending on how data are gathered, you can calculate and present energy use and savings in various ways that make sense for your program. For example, energy savings can be calculated by season, by building type, by different areas, by gas versus electricity, and so on. All data should be corrected for weather and other relevant factors.

Behavior changed. To understand people's behavior change and to what extent the campaign contributed to it, you need direct feedback from employees. At the end of the campaign, you want to understand two fundamental things: (1) to what extent people took actions that reduced energy use (including actions taken), and (2) the effectiveness of various campaign activities and communications in prompting those changes. You may also wish to gauge staff members' willingness to continue their energy-efficient lifestyles.

To learn about these things, ask questions similar to those described in the mid-course evaluation, tailoring them for the end of the campaign. The goal of the evaluation is to understand the effectiveness of the campaign well enough to be able to use or adapt its activities for longer term efforts, eliminating or replacing activities that were ineffective.

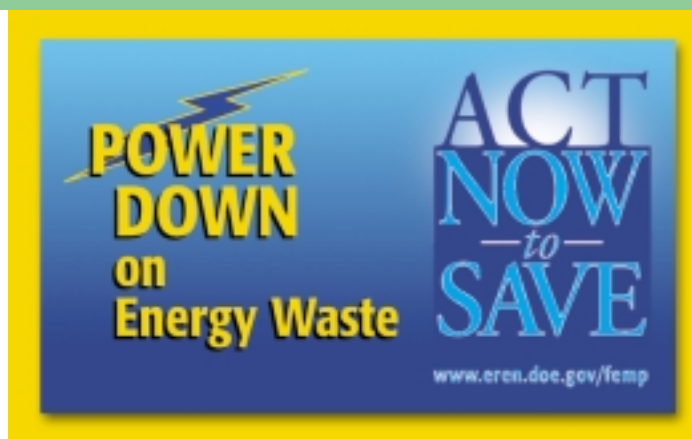
The information received from staff members, combined with other information to which you may have access, helps you put the energy-use data into perspective. You may discover, for example, that one office or lab saved considerably more than others, but not know why until you hear from its staff. You may learn from them that their members were the only ones who received a certain newsletter or had educational projects involving children. You may also discover that they had the highest percent of office audits or signed the most commitment forms promising to take certain energy-saving actions in their homes.

On the other hand, you may discover that staff members who joined the organization after a certain date were unaware of the campaign and consequently did nothing to change. Or perhaps people were enthused at the beginning of the campaign, but as time went on, enthusiasm waned and behaviors reverted. Or perhaps certain behaviors, such as turning down a thermostat, proved uncomfortable or inconvenient over time.

All information gathered is relevant and important. All kinds of findings, both positive and negative, help shed light on the effectiveness and timing of certain campaign activities in contributing to the overall result. With adequate resources and time, the best evaluation uses two methods: quantitative (involving numbers such as energy amounts saved, how many people said what, or number of energy audits requested) and qualitative (interpreting the meaning in what people have said or done). Once the combined data are analyzed and compared, the key findings about the effectiveness of the program will rise to the top. It helps to have various team members conduct this evaluation together and discuss the combined findings to reach a consensus of perspectives.

Reporting on and Publicizing Results

Staff members, your team, and top management will want to know the results of the campaign. Your team will appreciate a separate briefing. Higher level management, U.S. Department of Energy organizations, local utilities, professional scientific societies, schools,



energy coalitions, and working groups may also be interested in the results. All of these people and organizations will also want to know about any follow-up or ongoing efforts.

Reporting can take many different forms, but should be tailored to the audience for which it is intended. For example, communications with staff members may emphasize incentives won, pride, and celebration, as well as the need for ongoing action. Top management may be interested in how to extend or improve on the results to meet future energy conservation goals. The facility's public affairs office may wish to send press releases to local news media, emphasizing local angles such as school or utility involvement. Scientific societies and coalitions may be interested in new or corroborative findings and implications for future studies.

In reporting on campaign results, be prepared to provide or discuss the following:

- Data, visuals, other information, and quotes in various formats and for various audiences.
- Why the campaign was or was not successful and, more importantly, what will be done in the future as a result.
- How the campaign fits into a broader context, such as meeting Federal and military energy goals.
- Implications of upcoming changes that could affect future energy use. Examples are privatization of military housing and increased use of energy savings performance contracts, where contractors upgrade facilities to make them more energy efficient and are paid from the resulting energy cost reductions.

Tailoring the reporting to target audiences will help to ensure a well-received message and a greater probability of a sustained effort over time.

SUSTAIN THE EFFORT

Studies have shown that the most challenging aspect of energy efficiency programs aimed at changing behavior is sustaining new behaviors over time. For a variety of reasons, it is very difficult to change ingrained habits and underlying attitudes. (As evidence, recall how many years it took to persuade people to recycle, wear seatbelts, and exercise regularly—and many people still don't do these things, despite the obvious benefits!) Despite these barriers, both Federal mandates and wise energy-use practices indicate that multiple methods to reduce energy use (and keep costs down) are necessary and beneficial. Technology and upgrades that are proven effective in achieving long-term savings must be augmented with enduring efficiency actions by people if continuing energy goals are to be met.

One campaign, regardless of how effective, is not much help if people revert to their former behaviors when the campaign ends. The following sections give some guidelines for sustained behavior change, based on research findings and programs found to be effective.

Reaching Newcomers

Newcomers to your facility, including new hires and short-term employees, should be targeted to keep awareness high as personnel move in and out of an organization. Newcomers typically receive a package of many different kinds of informational materials, but many do not take the time to read all of them.

Thus, do not rely on printed materials in the orientation package to carry the message about the organization's energy efficiency program.

More effective would be a requirement, as part of orientation, to view an energy efficiency video that models the desired behaviors. Newcomers could receive a personal visit or phone call from an energy manager describing the organization's energy efficiency program and offering assistance.

Self-Motivation/Awards

The underlying principle is that motivation from within (self-directed or intrinsic) has been shown more effective in changing energy-use habits than from an outside source (external), including money. Studies have shown that people obtain a great deal of satisfaction from participating in a worthwhile endeavor and behaving in an ecologically responsible fashion. In addition, environmental programs have found that parents sometimes are motivated to take actions that will make a better world for their children. (Other times, their children will motivate them).

These are exactly the attitudes that a long-term effort must capitalize on to succeed. A long-term efficiency

Key members of NASA's Energy Team receive the Presidential Award for Leadership in Federal Energy Management from Vice President Dick Cheney.

*For more information, please visit:
www.eren.doe.gov/femp.newsevents/pres_awards.html*



effort, therefore, could include reminding employees of the self-satisfaction associated with using energy wisely. The importance of passing along energy efficiency values to children should also be emphasized.

Non-financial, ongoing incentives might include such things as certificates of achievement, public recognition such as having names of energy savers listed in the organization's newsletter, recognition of military personnel by chains of command, the opportunity to be held up as an energy leader or mentor on site, and school award programs. Consider recognizing outstanding contributions by presenting in-house energy management awards. For an example of DOE's in-house awards program, please visit:

www.eren.doe.gov/femp/aboutfemp/doeenergymgt.html.

Or, to nominate your organization or a group of individuals through FEMP's Federal Energy and Water Management Awards program, see:

www.eren.doe.gov/femp/newsevents.html.

To identify effective non-financial incentives, solicit feedback from staff members. Test the effect of the incentives by evaluating savings and behavior change after incentives are made available.

Commitment

Personal commitment to take certain energy-efficiency actions seems to be one of the best techniques for lasting behavior change. In one study, participants who agreed to have their names published as part of the conservation study used 15% less natural gas and 20% less electricity than the control group. The most encouraging finding is that the differences were still significant 12 months later.

Institutionalization

The foundation for fostering enduring energy-efficient behavior must be built on institutionalization in your organization, especially when strengthened by the culture of your Federal agency. This means that regulations, policy, decisions, and behaviors incorporate energy efficiency as a fundamental value, rather than being imposed or added on. At DOE's Golden Field Office, for example, energy efficiency is part of staff performance evaluations. The ultimate outcome is that staff members incorporate energy efficiency into their daily lives by habit and because it is important to them—like keeping their children immunized.

As a Federal Energy Coordinator, you are in a key position to establish and sustain the type of energy program described in this handbook. The implementation of an effective energy awareness program at your facility is by extension an important piece of saving energy and costs throughout the entire Federal sector. The increased knowledge we gain toward improving energy habits and behaviors in the Federal government will extend to the private sector as well. Saving energy is everyone's business, because it benefits everyone. If we in the Federal government can lead by example to increase energy awareness by our actions and practices, we can make a vital difference for our fellow workers and neighbors, for American taxpayers, for our children, and the world.

